IS Sector

• $10 billion in sales in 2008
• 7,000 contracts
• 33,000 employees

Products and Services

• Mission support
• Cybersecurity
• Command, control, and communications
• Enterprise applications
• IT & network infrastructure
• Management & engineering services
• Intelligence, surveillance, & reconnaissance
IS as a CMMI for Services Early Adopter

- IS has a history of successful CMMI adoption
  - One of the first large organization adopters
  - Over 80 organizations (over 250 projects) appraised at Level 3 or higher
- IS was very interested in applying our successes to services
- Strong IS involvement in developing the CMMI for Services model
  - Hal Wilson – CMMI Steering Group advocate for developing the model
  - Craig Hollenbach – Model Project Manager
  - Brandon Buteau – Model Architect
  - Roy Porter – One of the model authors
- Made sense for IS to be an early adopter
- IS completed a successful Level 3 SCAMPI A in October 2009
  - Led by Pat O’Toole and 3 lead appraisers (John Clouet, Ron Ulrich, Ravi Khetan)
SCAMPI A Projects

- Started with 4 pilot projects

- Positives
  - All previously appraised at CMMI Level 3 or 5
  - 3 projects were service-only, 1 was software/hardware/service
  - Felt adopting the model would improve their processes

- Negatives
  - Projects were apprehensive about the newness of CMMI-SVC
  - Wanted assurance that IS experts would assist them in understanding the model and helping with improvements and artifacts

- Business reasons eventually reduced the appraisal to 1 project
  - IS and the project could still benefit
7 CMMI for Services Unique Process Areas

- **Service Delivery**
  - Deliver services per service agreements

- **Capacity and Availability Management**
  - Effective performance and resources are used effectively

- **Incident Resolution and Prevention**
  - Resolution and prevention of service incidents.

- **Service Continuity**
  - Continuity of services during and following significant disruptions

- **Service System Development**
  - Design, develop, integrate, verify, etc. the service system.
  - **OPTIONAL**

- **Strategic Service Management**
  - Standard services per strategic needs and plans

- **Service System Transition**
  - Deploy a new or changed service system

Note: Also 1 new practice in OPD and PP.
Presentation will cover what we learned from the easiest (Service Delivery) through the most painful (Strategic Service Management) process areas.
1 Service Delivery

- Projects naturally implemented service delivery
  - Projects had service agreements
  - Projects prepared for service delivery
  - Projects delivered services

- Analyzing existing agreements and service data (SP 1.1)
  - Projects may or may not do this, and even if they did, it may not be documented

- None

Positives

Slight Difficulty

Confusion
2 Incident Resolution and Prevention

- Model improves trouble tickets
  - Projects added more fields to capture more data for trending
  - Encouraged capturing information, i.e., write it down

- Workarounds (SP 2.3)
  - Workaround repository is not required, but the model mentions it, and projects generally do not have one
  - Workaround used is not always documented

- Incidents (Goal 2) versus problems (Goal 3) not clear
  - Not all “incidents” are a “problem”. Someone might report an incident, “The computer is broken”. Your response, “You didn’t turn it on”. It’s not a “problem” unless it happens a lot.
  - Model team is correcting the confusion in V1.3
3 Service System Transition

- Model adds more discipline for transitions
  - Encourages better planning for transitions
  - Ensures impacts are known and impacts are monitored
  - Ensures people are prepared for changes
  - Stops dump and run attitude, “Here you go,… good luck”

- Transition tends to be informal
  - Transition plans may or may not exist
  - Monitoring impacts tends to be informal, “Hey, how’s it going?”
  - More difficult to gather evidence

- None
4 Service System Development

- Ensures all life-cycle activities are addressed
- Projects are very happy to use a model that fits their work (CMMI for Development more painful)
- Optional (should use for complex service systems)

Positives

- Software/hardware/service projects miss services
  - Have plenty of evidence, but very little for services
  - For example, GP 2.8 status reports only address the software/hardware product, but not the service system
  - Service-only projects are much easier to work with

Difficult

- Include the optional process area or not ???
- In V1.3, SSD will likely NOT be an option. Projects must provide rationale why it is N/A like SAM.

Confusion
5 Capacity and Availability Management

- Ensures projects monitor these critical items
- Helps formalize both capacity and availability
- Ensures measures are collected and analyzed, which is good

**Positives**

- Availability and/or capacity not done
- If done, not done formally
- Only done well if a contract requirement

**Difficult**

- Should be at the service system level, not component level, although key components should do it
- Service system representation (SP 1.3) does not have to be graphical, but must provide useful information (Buteau)

**Confusion**
Service Continuity

- Projects generally do not think of continuity until a major disruption occurs
- Puts things in place BEFORE a major disruption occurs
- Brings structure to planning and implementation

Lack of Service Continuity Plans (SP 2.1)
- Assume they will not have sufficient plans
- Created a detailed 53 page Service Continuity Plan Template
- Template helped projects tremendously

Verify and validate the Service Continuity Plan (SP 3.2)
- People are not used to testing and validating a “plan”
- Educated the project using the template
- Key services and essential functions and resources in the plan should be verified and validated (Buteau)
Last but not least, ... Strategic Service Management
7 Strategic Service Management (1 of 2)

- Ensures the long term health of the service
- Evolves the service per market and customer needs so service does not stagnate over time
- Makes it very clear what services are provided

Positives

- Properties of standard services and service levels (SP 2.1)
  - Model fits cell phone companies with similar services
  - Much more difficult with companies as diverse as Northrop Grumman (Red Cross blood bank project, anti-terrorist FBI project, Internal Revenue System (IRS) project, etc.)
  - Pick the level in the organization where things become more common
  - Used project evidence. Project had a “Chinese Menu” where you order this for your site, and that for your site, etc.
• **STSM is project or organization?**
  - Immediate reaction was STSM was a project-level process area
  - STSM is not in the Process Management category like OPD, OPF, etc.
  - According to the authors, it was intended to be organizational, similar to OPD, OPF, etc.

• **STSM is not like OPD, OPF, etc.**
  - OPD, OPF, etc. evidence works whether there is 1, 2, or 100 projects
  - In STSM, switching to 1 project changes the evidence
  - Populated PIID with Sector, Division, Department, and project evidence
  - Appraisal team called a 1 hour telecon for STSM
  - Debated on who should do this, Sector? Division? Business Unit? Department? Project?
  - Model authors stated practices could be done at one or more levels, … it depends
Miscellaneous

• What is a service project
  – A “project” covers the scope of one service agreement, which may contain several services (Buteau)
  – One appraisal team member felt each service within a project could be treated as a separate “project” and should do every practice

• Enhance training
  – Expand appraisal team member training
  – Appraisal team appraised development projects for so long, they may not be able to shift their thinking to services

• Typical “gap analysis” approach won’t work
  – Address the 7 new service-specific PAs and the 1 additional practice in PP and OPD and I’m done,… WRONG
  – Half way through, realized OPD, OPF, etc. only contained evidence for systems/hardware/software but nothing for services. Reworked OPD, OPF, etc. to add service-specific evidence.
Summary

- Don’t assume if you address the 7 new service-specific Process Areas (and 1 PP and OPD practice), you’re done
- Beware of Strategic Service Management
- Overall, transitioning to the new CMMI for Services model was a great idea
- Recommend using the model, …I like it!

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